

CLAIMS

What is claimed is:

- 5           1. A battery pack comprising:  
a housing comprising opposing walls;  
a plurality of cells disposed within the housing;  
at least two terminals electrically connected to the cells;  
a latching mechanism disposed on each opposing wall for latching the battery  
10 pack to a cordless device, each latching mechanism comprising a latch and a button  
disposed on the wall for moving the latch between unlatching and latching positions, the  
latching buttons being disposed along a first plane, the first plane being substantially  
vertical;  
wherein number of cells disposed along the first plane is smaller than number of  
15 cells disposed along a second plane substantially parallel to the first plane.
2. The battery pack of Claim 1, further comprising a stacked cell disposed on the  
plurality of cells.
3. The battery pack of Claim 2, wherein the stacked cell is disposed along the  
first plane.
- 20           4. The battery pack of Claim 3, wherein the stacked cell is not included in the  
number of cells disposed along the first plane.
5. The battery pack of Claim 1, wherein at least one wall has first and second  
portions.
6. The battery pack of Claim 5, wherein at least one of the buttons is disposed on  
25 the second portion of the at least one of the walls.

7. The battery pack of Claim 5, wherein the first and second portions comprise substantially non-coplanar surfaces.

8. The battery pack of Claim 7, wherein distance between the second portion surface and a center plane dissecting the housing is smaller than distance between the first  
5 portion surface and the center plane.

9. The battery pack of Claim 8, wherein the first portion surface is substantially vertical.

10. The battery pack of Claim 8, wherein the second portion surface is substantially vertical.

10 11. The battery pack of Claim 8, wherein the second portion surface is inclined.

12. The battery pack of Claim 8, wherein at least one of the buttons is disposed on the second portion surface of the at least one of the walls.

13. The battery pack of Claim 1, wherein the cells are vertical.

14. The battery pack of Claim 1, wherein at least one of the cells is vertical.

15 15. The battery pack of Claim 1, wherein the housing comprises a floor.

16. The battery pack of Claim 15, wherein the floor is substantially horizontal.

17. The battery pack of Claim 15, wherein the latching buttons are disposed along a first line located at a first distance from the floor.

18. The battery pack of Claim 17, wherein distance between the latching buttons  
20 along periphery of the housing is smaller than distance between two points along periphery of the housing, the two points being contained within a second line parallel to the first line and located at the first distance from the floor.

19. A battery pack comprising:

a housing comprising opposing walls, at least one of the walls having first and second portions, the first and second portions comprising substantially non-coplanar surfaces, the housing being dissected by a center plane;

5 a plurality of cells disposed within the housing;

at least two terminals electrically connected to the cells;

a latching mechanism disposed on the housing for latching the battery pack to a cordless device, the latching mechanism comprising a latch and a button disposed on the second portion for moving the latch between unlatching and latching positions;

10 wherein distance between the second portion surface and the center plane is smaller than distance between the first portion surface and the center plane.

20. The battery pack of Claim 19, wherein the first portion surface is substantially vertical.

21. The battery pack of Claim 19, wherein the second portion surface is  
15 substantially vertical.

22. The battery pack of Claim 19, wherein the second portion surface is inclined.

23. The battery pack of Claim 19, wherein at least one of the buttons is disposed  
on the second portion surface of the at least one of the walls.

24. The battery pack of Claim 19, wherein the cells are vertical.

20 25. The battery pack of Claim 19, wherein at least one of the cells is vertical.

26. The battery pack of Claim 19, wherein the housing comprises a floor.

27. The battery pack of Claim 26, wherein the floor is substantially horizontal.

28. The battery pack of Claim 26, further comprising a latching button on the other wall.

29. The battery pack of Claim 28, wherein the latching buttons are disposed along a first line located at a first distance from the floor.

5        30. The battery pack of Claim 29, wherein distance between the latching buttons along periphery of the housing is smaller than distance between two points along periphery of the housing, the two points being contained within a second line parallel to the first line and located at the first distance from the floor.

10       31. The battery pack of Claim 28, wherein number of cells disposed along a first plane between the latching buttons is smaller than number of cells disposed along a second plane substantially parallel to the first plane.

32. The battery pack of Claim 31, further comprising a stacked cell disposed on the plurality of cells.

15       33. The battery pack of Claim 32, wherein the stacked cell is disposed along the first plane.

34. The battery pack of Claim 33, wherein the stacked cell is not included in the number of cells disposed along the first plane.

35. A battery pack comprising:  
a housing comprising a floor and opposing walls connected to the floor, at least  
20    one wall having first and second portions;  
a plurality of cells disposed within the housing;  
at least two terminals electrically connected to the cells;

a latching mechanism disposed on each opposing wall for latching the battery pack to a cordless device, each latching mechanism comprising a latch and a button disposed on each wall for moving the latch between unlatching and latching positions, the latching buttons being disposed along a first line located at a first distance from the floor;

- 5            wherein distance between the latching buttons along periphery of the housing is smaller than distance between two points along periphery of the housing, the two points being contained within a second line parallel to the first line and located at the first distance from the floor and in the first portion.

36. The battery pack of Claim 35, wherein the first and second portions comprise  
10 substantially non-coplanar surfaces.

37. The battery pack of Claim 36, wherein distance between the second portion surface and a center plane dissecting the housing is smaller than distance between the first portion surface and the center plane.

38. The battery pack of Claim 36, wherein the first portion surface is  
15 substantially vertical.

39. The battery pack of Claim 36, wherein the second portion surface is substantially vertical.

40. The battery pack of Claim 36, wherein the second portion surface is inclined.

41. The battery pack of Claim 36, wherein at least one of the buttons is disposed  
20 on the second portion surface of the at least one of the walls.

42. The battery pack of Claim 35, wherein the cells are vertical.

43. The battery pack of Claim 35, wherein at least one of the cells is vertical.

44. The battery pack of Claim 35, wherein number of cells disposed along a first plane between the latching buttons is smaller than number of cells disposed along a second plane substantially parallel to the first plane.

45. The battery pack of Claim 44, further comprising a stacked cell disposed on  
5 the plurality of cells.

46. The battery pack of Claim 45, wherein the stacked cell is disposed along the first plane.

47. The battery pack of Claim 46, wherein the stacked cell is not included in the number of cells disposed along the first plane.

10 48. A battery pack comprising:

a housing comprising a first portion having a first floor and first and second walls connected to the first floor, and a second portion having a second floor and third and fourth walls connected to the second floor, where the first and second floors are non-coplanar;

15 a plurality of cells disposed within the housing; and  
at least two terminals electrically connected to the cells.

49. The battery pack of Claim 48, further comprising first and second latching mechanisms disposed on the housing for latching the battery pack to a cordless device.

50. The battery pack of Claim 49, wherein each latching mechanism comprises a  
20 latch and a button connected to the latch for moving the latch between unlatching and latching positions.

51. The battery pack of Claim 50, wherein at least one button is disposed on the second portion.

52. The battery pack of Claim 50, wherein the latching buttons are disposed along a first line located at a first distance from first floor plane.

53. The battery pack of Claim 52, wherein distance between the latching buttons along periphery of the housing is smaller than distance between two points along  
5 periphery of the housing, the two points being contained within a second line parallel to the first line and located at the first distance from the first floor plane.

54. The battery pack of Claim 50, wherein number of cells disposed along a first plane between the latching buttons is smaller than number of cells disposed along a second plane substantially parallel to the first plane.

10 55. The battery pack of Claim 54, further comprising a stacked cell disposed on the plurality of cells.

56. The battery pack of Claim 55, wherein the stacked cell is disposed along the first plane.

57. The battery pack of Claim 56, wherein the stacked cell is not included in the  
15 number of cells disposed along the first plane.

58. The battery pack of Claim 48, wherein the first and second portions comprise substantially non-coplanar surfaces.

59. The battery pack of Claim 58, wherein distance between the second portion surface and a center plane dissecting the housing is smaller than distance between the first  
20 portion surface and the center plane.

60. The battery pack of Claim 58, wherein the first portion surface is substantially vertical.

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61. The battery pack of Claim 58, wherein the second portion surface is substantially vertical.

62. The battery pack of Claim 58, wherein the second portion surface is inclined.

63. The battery pack of Claim 58, wherein at least one of the buttons is disposed

5 on the second portion surface.

64. The battery pack of Claim 48, wherein at least one of the cells is horizontal.

65. The battery pack of Claim 64, wherein at least one of the cells is vertical.